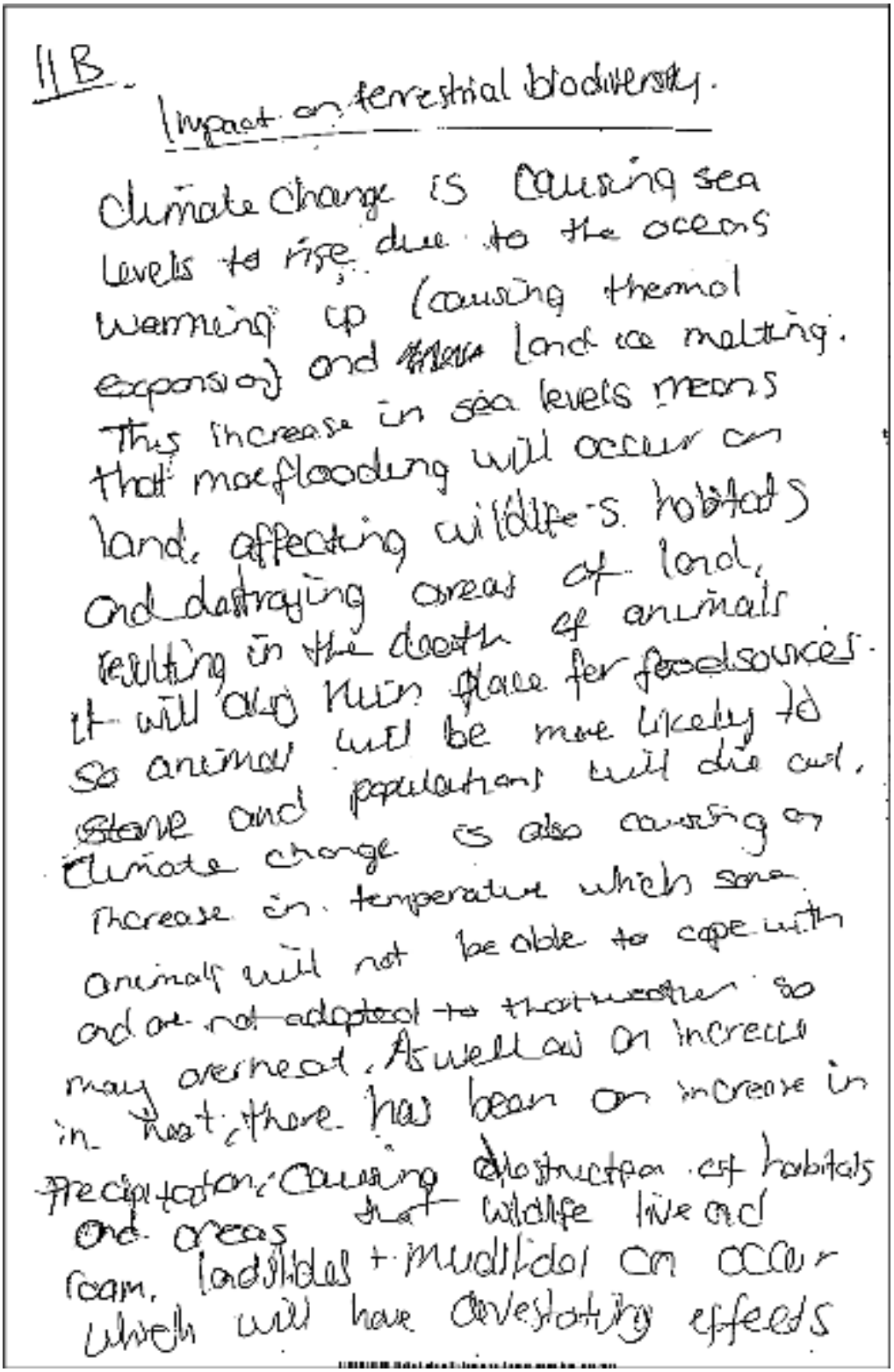
Q11B – Climate change

Candidate I evidence



11B.

Impact on terrestrial biodiversity.

Climate change is causing sea levels to rise due to the oceans warming up (causing thermal expansion) and land ice melting. This increase in sea levels means that more flooding will occur on land, affecting wildlife's habitats and destroying areas of land, resulting in the death of animals it will also ruin place for food sources so animal will be more likely to starve and populations will die out. Climate change is also causing an increase in temperature which some animals will not be able to cope with and are not adapted to that weather so may overheat. As well as an increase in precipitation, causing destruction of habitats in that there has been an increase in and areas that wildlife live and roam. landslides + mudslides can occur which will have devastating effects

on the wildlife. Non tropical storms and natural disaster are being caused due to climate change which will affect many habitats food sources and could outright kill the wildlife as they would have little or no shelter. The amount of animals in total would decrease, which would have affects on the food chain and biodiversity as lack of prey for predators to consume

Species distribution

Animals can sense storms and changes to the weather coming and instinctively will flee from the area likely to be hit - if climate change is going to hit an area and cause permanent damage + changes there the wildlife will not return to there habitats and find new ones in a area that better suits their characteristics. It will lead to animals leaving area and other animals having to leave area due to their food source moving.

[END OF QUESTION PAPER]

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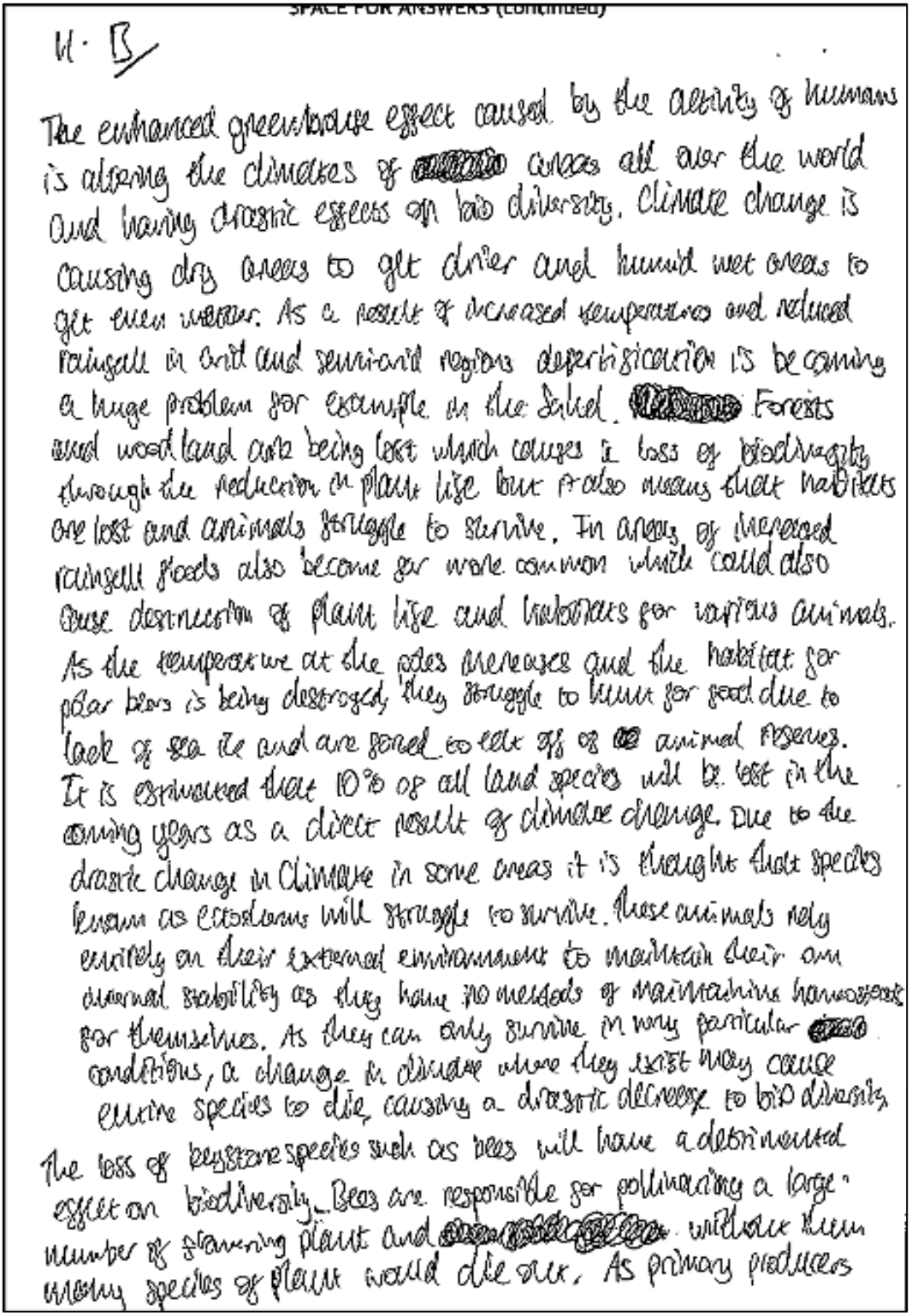
ADDITIONAL SPACE FOR ANSWERS AND ROUGH WORK

11B (continued).

Once animals flee, the whole food chain will be disrupted and will not only lead to a decrease in biodiversity but also extinction of species. Animals will most likely move to higher ground away from flooding however not too high due to the temperature being too cold, the higher they go. Animals will eventually undergo mutations overtime which may benefit the species and hence the ~~change~~ characteristic of that animal will lead to adaptations and the species will be able to live permanently in that area. If climate change only has temporary effects then the wildlife may return to the same area but only in little number and will have to be able to survive with little of what they had. Species will all go in different areas, depending on their characteristics.

Candidate J evidence



SPACE FOR ANSWERS (continued)

M · B

The enhanced greenhouse effect caused by the activity of humans is altering the climates of [redacted] areas all over the world and having drastic effects on bio diversity. Climate change is causing dry areas to get drier and humid wet areas to get even wetter. As a result of increased temperatures and reduced rainfall in arid and semi-arid regions desertification is becoming a huge problem for example in the Sahel. [redacted] Forests and woodland are being lost which causes a loss of biodiversity through the reduction in plant life but it also means that habitats are lost and animals struggle to survive. In areas of increased rainfall floods also become far more common which could also cause destruction of plant life and habitats for various animals. As the temperature at the poles increases and the habitat for polar bears is being destroyed they struggle to hunt for food due to lack of sea ice and are forced to exist off of [redacted] animal reserves. It is estimated that 10% of all land species will be lost in the coming years as a direct result of climate change. Due to the drastic change in climate in some areas it is thought that species known as ecosystems will struggle to survive. These animals rely entirely on their external environment to maintain their own internal stability as they have no methods of maintaining homeostasis for themselves. As they can only survive in very particular [redacted] conditions, a change in climate where they exist may cause entire species to die, causing a drastic decrease to bio diversity.

The loss of keystone species such as bees will have a detrimental effect on biodiversity. Bees are responsible for pollinating a large number of flowering plants and [redacted] without them many species of plant would die out. As primary producers

producers could be lost as a result of this entire food chains could cease to exist, of course lowering biodiversity.